DO 2;6-YEAR-OLDS UNDERSTAND PRESUPPOSITION? AN EYE-TRACKING STUDY OF THE DISCOURSE PARTICLES TOO AND AGAIN

VISIT 2: SCIENTIFIC REPORT

The second meeting of the two project members, Frauke Berger (University of Potsdam, Germany) and Nausicaa Pouscoulous (UCL, London, UK) took place in London between June 5th – 15th 2012. During this meeting, we analysed and evaluated the results of pilot studies conducted earlier on this year with 2;06- and 3;00-year-olds as well as adults.

In this project we aim to test the comprehension of the additive particles "too" and "again" in young children. Since the distinct additive meaning contribution of each of both particles is strictly presuppositional, we therefore test children on their ability to take presuppositionally conveyed information into account in sentence interpretation. Previous research indicates, that children up to school age might perform poor on interpreting sentences containing too, although they produce the particle from very early on (around their second birthday). However, in our opinion, poor performance on comprehension tasks is likely to be task-related and motivated by an experimental setup which masks the linguistic competence of children. We already pushed forward this view in our own previous work on "too" (Berger & Höhle, 2012) and "too" and "again" (Pouscoulous, Lieven & Tomasello, in prep.). These studies had demonstrated that children as young as 3 years do consider the presuppositions triggered by too and again in sentence interpretation.

In the current project, we aim to refine the findings of our previous studies and to further narrow down the exact onset age of understanding sentences with the two presupposition triggering particles. In order to do so, we need to design an experimental task and technique that allows for testing children's comprehension in an (a) felicitous, and (b) toddler appropriate (discourse) context and experimental setting. We will therefore adapt the paradigm designed by Pouscoulous and her colleagues as an act-out task and use it with an eye-tracker. In that study, children were presented with two toy characters, one of which performed an action (e.g., dance). They then heard either the phrase, "Anna wants to dance, too," or "Anna wants to dance again", where, crucially, the name "Anna" hadn't been used before. The child was asked to help Anna perform the action. Thus, in order to assign the correct referent to "Anna", pick up the corresponding puppet and make her dance, for instance, the child had to make an inference based on the presupposition triggered by either "too" or "again".

In our experiment, German 2;6-year-olds will see the same basic pattern: two similar nameless characters, each performing an action, followed by a sentence containing "too" or "again". The study will use a 2-alternative forced-choice paradigm. Specifically, we expect differing proportions of looks to the same character after "too", compared to "again", resulting from children's anticipation of the event, announced by the test sentence.

The purpose of the 2nd visit was to discuss the results of the piloting and agree on the necessary changes for the study itself. Prior to the visit a pilot study was run by Frauke Berger with ten adults, ten 3;0-year-olds and ten 2;6-year olds. Participants of the three age groups were presented with two flash-animated movies, one containing a test sentence with "too" and the other a sentence with "again". In general, pilotings went well for all age groups. In fact, is seems even the youngest children considered the different presuppositions triggered by "too" and "again" when interpreting the sentences, as indicated by extremely diverging gaze patterns. However, the design of the trials and the study still needed to be optimized in order to be able to run a full experiment with adults and children this summer. During the 2nd visit the following changes were discussed and immediately implemented in the stimuli:

(a) The types of characters occurring in the trials were defined (sheep, dog, cat, horse) and had to be individually animated by using flash. In total 16 movies had to be created in order to serve as test stimuli (ensuring each animal to occur in each condition thereby balancing the location (left or right animal) and colour of the target animal in each trial).

(b) Auditive stimuli had to be adjusted to the new characters and distracting events as the ringing of a bell, originally meant to enhance children's attention, were eliminated from the movies.

(c) The specific order of presentation of the conditions("too" and "again") was extensively discussed and finally determined: AABB and ABAB. With Jeff Lidz (who was giving a 3-days-seminar about language acquisition at UCL during the time of the 2nd visit), the pros & cons of different orders of trial presentations in experiments with children and its consequences for data analysis could be discussed. This was extremely helpful, because children of this age are prone to show carry over effects in experiments.

(d) In additional meetings, Richard Breheny, Kriszta Szendröi (from UCL), and Napoleon Katsos (from Cambridge University) also gave important comments on the trial design, experimental design and possible ways of dealing with the data statistically.

Taken together, all existing shortcomings and pending items concerning the trial and experimental design have been solved during the 2nd visit. Frauke Berger has started testing 2;6 year olds in the new version of the experiment immediately after arriving in Germany.